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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,869	01/21/2004	Pekka Laukkanen	LEIT 0101 PUSA1	3141
22045	7590	10/04/2005	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			LAVILLA, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/761,869

Applicant(s)

LAUKKANEN ET AL

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-11, 13, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 12, and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/177,644.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>20050622</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                                     |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
2. A person shall be entitled to a patent unless –
3. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1-3, 5, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Sigri Electrographit G 84 06019.0 for the reasons of record in the Office Action mailed on 6 April 2005.
5. Claims 1, 2, 5, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto EPA 0 461 253 for the reasons of record in the Office Action mailed on 6 April 2005.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto EPA 0 461 253 for the reasons of record in the Office Action mailed on 6 April 2005.
9. Claims 9-11, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sigri Electrographit G 84 06019.0 for the reasons of record in the Office Action mailed on 6 April 2005.

***Specification***

10. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

***Response to Amendment***

11. In view of applicant's amendments, applicant traverses the objection to the Abstract of the Office Action mailed on 6 April 2005. While the new text is satisfactory, the new Abstract should be provided on a separate sheet, and so this objection is introduced.
12. In view of applicant's amendments and arguments, applicant traverses the section 112, first paragraph rejection of the Office Action mailed on 6 April 2005. Rejection is withdrawn.

13. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejection of the Office Action mailed on 6 April 2005. Rejection is withdrawn.
14. In view of applicant's amendments and arguments, applicant traverses the section 102 and 103 rejections over Sigri Electrographit of the Office Action mailed on 6 April 2005. Applicant argues that Sigri Electrographit may not teach or suggest bonding based on compression and non-compression adhesion. Sigri Electrographit teaches roughening the composite, electrolessly depositing Cu, and then electroplating Ni or Cr. It would appear that the bonding can be characterized as compression and non-compression adhesion. The Cu would be expected to fill interstices in the roughened surface, while forming an outer layer of uniform surface. The coated layer would be expected to offer compression adhesion bonding as a consequence of frictional resistance in response to sliding of the casing with respect to the cylinder. Such resistance can be attributed to the proximity of the two contiguous surfaces, namely, the outer surface of the cylinder and the inner surface of the metal casing. Moreover, in the event that covalent attachments are not formed, the coated layer would be expected to offer non-compression adhesion bonding as a consequence of the interlocking nature of the interface that gives rise to mechanical and chemical van der Waals attachments. The compression adhesion bonding is also understood to arise from the circumstance that the outer metal layer resists outward expansion of the cylinder and that the cylinder resists inward movement of the metal layer. It is

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remarked that there is no claimed degree of compression that is necessary.

Rejections are maintained.

15. In view of applicant's amendments and arguments, applicant traverses the section 102 and 103 rejections over Hashimoto of the Office Action mailed on 6 April 2005. Applicant argues that Hashimoto may not teach or suggest bonding based on compression and non-compression adhesion. Hashimoto teaches drawing a soft metal Cu layer over a composite having a roughened outer surface. It would appear that the bonding can be characterized as arising from compression and non-compression adhesion. Since the Cu is soft, it would be expected, upon drawing, to fill interstices in the roughened surface. As such, the outer metal layer compresses the roller and; in the event that covalent attachments are not formed, adheres by the interlocking nature of the interface due to mechanical and chemical van der Waals attachments. Rejections are maintained.

***Allowable Subject Matter***

16. Claims 4, 6, 12, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
17. None of the reviewed prior art nor prior art of record teaches or suggests the subject matter of Claims 4, 6, 12, and 14. Particularly, the prior art does not teach or suggest a metal casing having the claimed surface pattern or embossments to facilitate metal treatment and/or plating with a coating layer.

***Conclusion***

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
19. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa  
20 September 2005



**MICHAEL E. LAVILLA PH.D.**  
**PRIMARY EXAMINER**